

What is claimed is:

1 1. An image processing apparatus for correcting data of
2 each pixel in an edge area, comprising:

3 a first judgment unit for judging whether a target pixel
4 is in a first edge area;

5 a second judgment unit for judging whether the target pixel
6 is in a second edge area having a lower intensity variation level
7 than the first edge area;

8 a first correction unit for conducting first correction
9 processing on data of each pixel that is judged by the first
10 judgment unit to be in the first edge area; and

11 a second correction unit for conducting second correction
12 processing on data of each pixel that is judged by the second
13 judgment unit to be in the second edge area.

1 2. The image processing apparatus of Claim 1, wherein
2 the data includes a plurality of pieces of color component
3 data,

4 the first correction unit conducts correction processing
5 on at least one of the plurality of pieces of color component
6 data differently from the other pieces of color component data,
7 and

8 the second correction unit conducts correction processing
9 on each piece of color component data in a same manner.

1 3. The image processing apparatus of Claim 1, wherein

2 the data includes chromatic color component data and
3 achromatic color component data, and
4 the second correction unit conducts correction processing
5 only on the achromatic color component data.

1 4. The image processing apparatus of Claim 1, wherein
2 the data is a density value, and
3 the first correction processing includes processing to
4 increase or decrease the density value.

1 5. The image processing apparatus of Claim 1, wherein
2 the first judgment unit and the second judgment unit shares
3 a differential filter, the differential filter outputting
4 intensity variations among pixels surrounding the target pixel,
5 the first judgment unit judges whether the target pixel
6 is in the first edge area by comparing an output from the
7 differential filter with a first reference value, and
8 the second judgment unit judges whether the target pixel
9 is in the second edge area by comparing the output from the
10 differential filter with a second reference value that is smaller
11 than the first reference value.

1 6. The image processing apparatus of Claim 1, wherein
2 the first judgment unit further judges whether the target
3 pixel is a chromatic color pixel or an achromatic color pixel,
4 and
5 the first correction unit conducts different processing

6 depending on whether the target pixel is a chromatic color pixel
7 or an achromatic color pixel.

1 7. An image forming apparatus, comprising:
2 a first judgment unit for judging whether a target pixel
3 is in a first edge area;
4 a second judgment unit for judging whether the target pixel
5 is in a second edge area having a lower intensity variation level
6 than the first edge area;
7 a first correction unit for conducting first correction
8 processing on data of each pixel that is judged by the first
9 judgment unit to be in the first edge area;
10 a second correction unit for conducting second correction
11 processing on data of each pixel that is judged by the second
12 judgment unit to be in the second edge area; and
13 an image forming unit for forming an image based on the
14 data corrected by the first correction unit and the second
15 correction unit.

1 8. The image forming apparatus of Claim 7, wherein
2 the data includes a plurality of pieces of color component
3 data,
4 the first correction unit conducts correction processing
5 on at least one of the plurality of pieces of color component
6 data differently from the other pieces of color component data,
7 and
8 the second correction unit conducts correction processing

9 on each piece of color component data in a same manner.

1 9. The image forming apparatus of Claim 7, wherein
2 the data includes chromatic color component data and
3 achromatic color component data, and
4 the second correction unit conducts correction processing
5 only on the achromatic color component data.

1 10. The image forming apparatus of Claim 7, wherein
2 the data is a density value, and
3 the first correction processing includes processing to
4 increase or decrease the density value.

1 11. The image forming apparatus of Claim 7, wherein
2 the first judgment unit and the second judgment unit shares
3 a differential filter, the differential filter outputting
4 intensity variations among pixels surrounding the target pixel,
5 the first judgment unit judges whether the target pixel
6 is in the first edge area by comparing an output from the
7 differential filter with a first reference value, and
8 the second judgment unit judges whether the target pixel
9 is in the second edge area by comparing the output from the
10 differential filter with a second reference value that is smaller
11 than the first reference value.

1 12. The image forming apparatus of Claim 7, wherein
2 the first judgment unit further judges whether the target

3 pixel is a chromatic color pixel or a achromatic color pixel,
4 and
5 the first correction unit conducts different processing
6 depending on whether the target pixel is a chromatic color pixel
7 or an achromatic color pixel.

1 13. An image processing method for correcting image data
2 corresponding to an edge area, comprising steps of:

3 judging (a) whether a target pixel is in a first edge area,
4 and (b) whether the target pixel is in a second edge area having
5 a lower intensity variation level than the second edge area;
6 and

7 conducting (a) first correction processing on data of the
8 target pixel that is judged to be in the first edge area, and
9 (b) second correction processing on the target pixel that is
10 judged to be in the second edge area.